



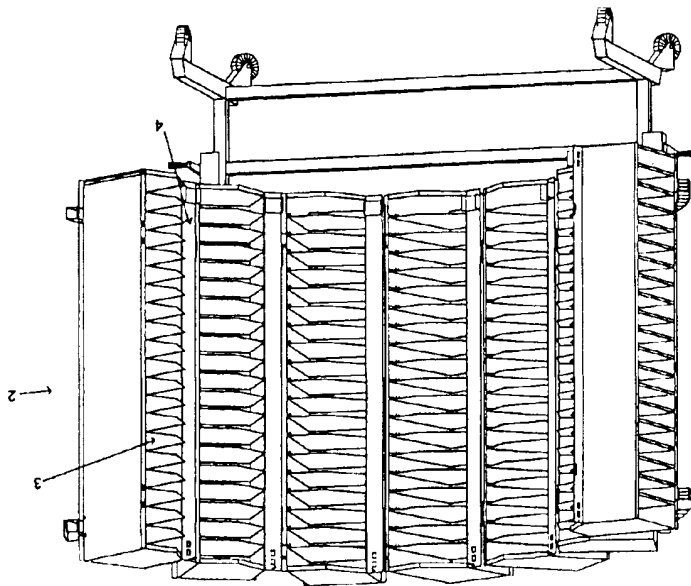
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(54) Title: **METHOD AND APPARATUS FOR PRE-WORK OF POSTAL DELIVERIES**



(57) Abstract

The present invention relates to a method and apparatus for pre-work of postal deliveries. The entire production chain is based on an alphabetical sorting system in which the deliveries are sorted directly to the delivery order.



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Method and apparatus for pre-work of postal deliveries

The present invention relates to a method and apparatus for pre-work of postal deliveries.

5 In the traditional pre-work model of postal deliveries, the route sorting field includes one shelf compartment for every delivery route. The delivery man collects the deliveries from the route sorting. The deliveries are sorted into shelf compartments of a post according to street, road or number; one post may include 30 - 40 shelf compartments. One shelf compartment will receive about 30 - 40 deliveries. 10 The deliveries are found in the shelf compartment in disorder. Then the deliveries and the delivery order list are taken from the shelf, and the deliveries are arranged into delivery order with the help of the delivery order list. This pre-work phase of delivery is time consuming and calls for professional skills, requiring a long time of initiation from new employees.

15 With the method and apparatus of the present invention, it is possible to considerably accelerate and increase the efficiency of the time used for the pre-work of delivery. The entire production chain is based on an alphabetical sorting system, in which deliveries are sorted directly to the order of delivery.

It is characteristic of the method of the invention that it contains the following steps: 20 - deliveries are sorted according to delivery routes, or they are otherwise grouped into alphabetical or numerical order by using address data, such as names and numbers of roads, streets, houses and dwellings;

25 - deliveries coming from the alphabetical sorting, a letter sorting machine, or directly from the sender are sorted into compartments according to sorting points in alphabetical or numerical order with the help of a delivery post list or display on the side of the compartments;

- the delivery post list is turned or changed, or the text on the delivery post display is changed so that the delivery order for the delivery route will appear;

30 - from the shelf compartments, the deliveries are collected into bundles in the order of delivery indicated by numbers or other markings.

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5 It is characteristic of the apparatus of the invention that it comprises a set of shelves, the side of which is provided for indicating the delivery order, or that it is a set of shelves, the side of which is provided with a display connected to a data system, the display being provided with information about the delivery post from the data system real-time or updated, and indicating the delivery order.

Figure 1 shows a set of shelves according to the method of the invention used in the alphabetical sorting of a post so that the extent of the alphabetical field required is achieved by combining the said sets of shelves;

10 Figure 2 shows an alphabetical set of shelves used in the pre-work of a delivery route according to the method of the invention; and

Figure 3 shows a delivery post list used in the method of the invention.

15 The method of the invention for pre-work of postal deliveries is based on an alphabetical sorting system. The post includes sets of shelves 1 for alphabetical sorting in accordance with Fig. 1; the extent of the alphabetical sorting field required at any given time is achieved by combining these sets of shelves. In the alphabetical sorting field, the shelves are found in alphabetical order, according to names of roads and streets, and houses are, for example, indicated in an ascending numerical order. The delivery routes are divided into sectors. There may be several sectors on one route, preferably from one to five. In alphabetical sorting, there may be several shelf compartments for one sector.

20 In post centres, deliveries are sorted into bundles according to agreed letter combinations, or to street or road names. The deliveries in the bundle are sorted in the part of the alphabetical sorting field, in which the corresponding alphabets are found. The bundle may also be directed straight to the delivery route, past the alphabetical sorting.

25 The delivery man collects the deliveries belonging to the sector in hand from the alphabetical sorting. Fig. 2 shows an alphabetical set of shelves 2 used in the pre-work of a delivery route. The deliveries are sorted into shelf compartments 3 on the basis of a delivery post list on the side 4 of the row of shelves, the streets being preferably found in alphabetical order, and houses and dwellings in ascending numerical order. In the pre-work shelf for the route, the sorting is preferably made on alphabetical set of shelves 2 at a time. Fig. 3 presents an embodiment of the delivery post list 5.

Magazines, letters and bulk printed matter may be received from the sender pre-sorted into alphabetical order and ascending numerical order so that it is very quick to sort them into the shelf compartments. Also standard-sized deliveries to be sort d with sorting machines may arrive in the pre-work post pre-arranged so that it is ea y and quick to put these into the right shelf compartments.

After the sorting, the delivery post lists 5 are turned so that the delivery order for the delivery route will appear. The deliveries are collected into bundles from the shelf compartments in numerical order, for example, from the smallest to the biggest. Also other symbols easy to read, for example letters, may be used.

10 Coloured stickers or other markings may be used in the delivery post lists 5 to indicate changes in delivery, for example, changes of address, temporary change of address, or interruption of delivery, or other matters to be taken into consideration, such as prohibition of delivery of advertisements.

15 In the method disclosed above, the shelf fixtures 1, 2 may be connected to the data systems guiding the production. In this case, the delivery post list 5 is replaced by a display attached to the alphabetical set of shelves 2 so that it is possible to maintain information about both delivery posts real-time.

20 When bulk printed matter is concerned, the data system also makes it possible to correctly indicate to which delivery posts certain deliveries are to be placed. So for example, it is not necessary for a sender of magazines to put addresses to each and every delivery, but the deliverer is provided with a register of recipients into which the recipients of the delivery are marked.

The description shows a preferable embodiment of the invention. However, the invention is not restricted to this embodiment only, but different features of the invention may be modified in the extent defined in the claims without leaving the scope of the invention.

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Claims

1. Method for pre-work of postal deliveries, characterised in that the method contains the following steps:

- deliveries are sorted according to delivery routes or otherwise divided into alphabetical or numerical order by using address data, such as names and numbers of roads, streets, houses and dwellings;

- deliveries coming from the alphabetical sorting, a letter sorting machine, or directly from the sender in alphabetical or numerical order are sorted into compartments (3) according to delivery posts with the help of a delivery post list (5) or display on the side of the compartments;

- the delivery post list (5) is turned or changed, or the text on the delivery post display is changed so that the delivery order for the delivery route will appear;

- deliveries are collected into bundles from the shelf compartments (3) in the delivery order indicated by numbers or some other markings.

2. Method according to claim 1, characterised in that, besides address information, the delivery point list (5) or display includes other information, such as information about changes in delivery.

3. Method according to claim 1 or 2, characterised in that the delivery post list (5) is a display connected to the data system, which is updated real-time.

4. Method according to claim 3, characterised in that the delivery post list (5) includes information about delivery posts for bulk printed matter, or the data system provides this information directly to the delivery post list so that the delivery itself has no address.

5. Apparatus used in the method of one of the claims 1 - 4, characterised in that the apparatus comprises a set of shelves (2) with a list containing information about the delivery post provided on the side so that the list is turned for indicating the delivery order.

6. Apparatus used in the method of one of the claims 1 - 4, characterised in that the apparatus comprises a set of shelves (2) with a display connected to a data system on the side, the display being provided with information about the delivery post either real-time or updated and indicating the delivery order.

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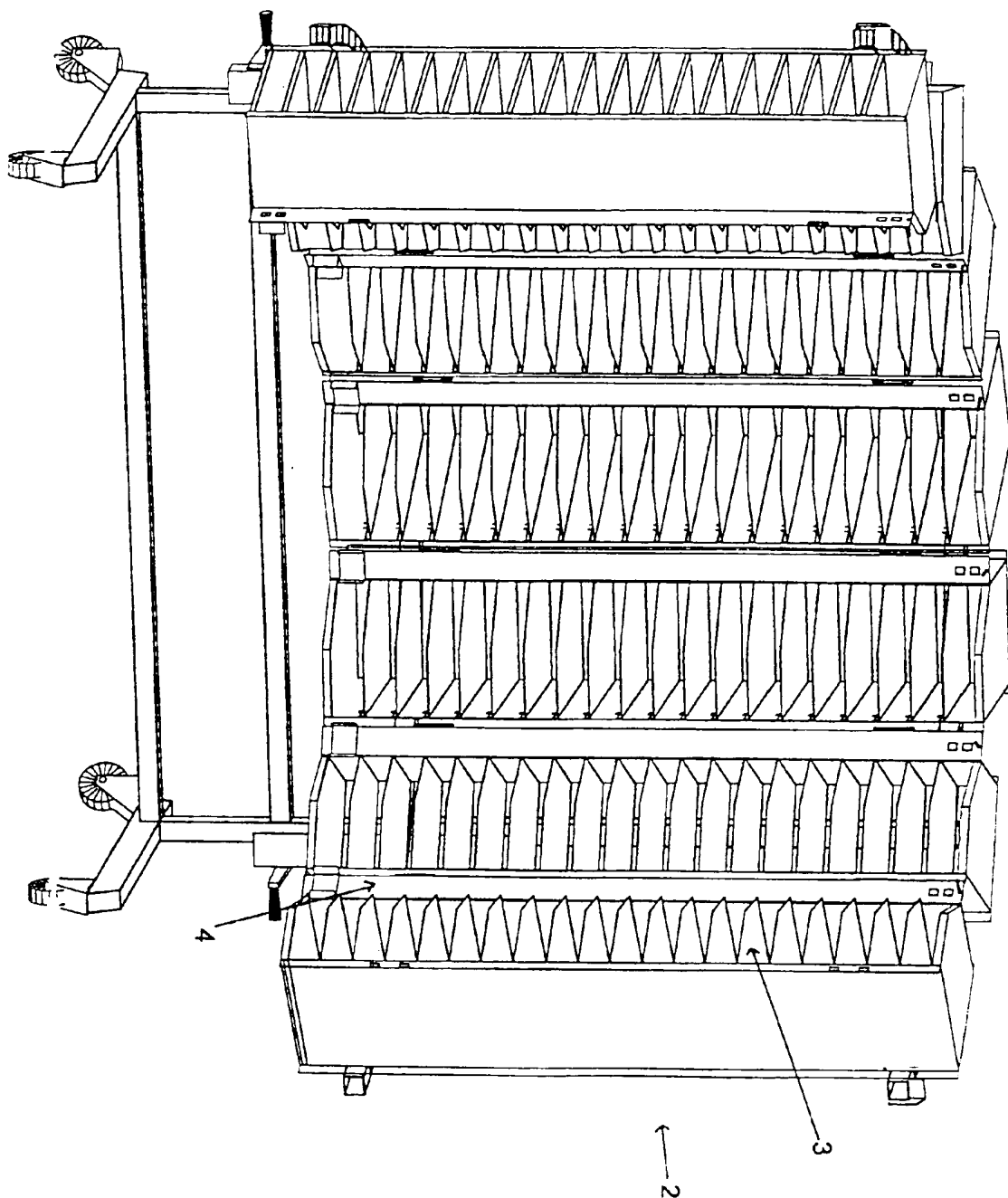


Fig. 2

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Fig. 3

<div> <div>01 FINLAND</div> <div>06570774</div> <div> <div>HELM</div> <div>KAIJA</div> <div>KERTTU</div> <div>KIMMO</div> <div>SAARA</div> <div>SELA</div> </div> </div> <div> <div>01 FINLAND</div> <div>06572905</div> <div> <div>HENRIKSSON PASI</div> <div>HIMANEN VEIKKO</div> <div>LATINEN MAIJA</div> <div>SALONEN INARI</div> <div>VASARA SARI</div> </div> </div> <div> <div>01 FINLAND</div> <div>18581614</div> <div> <div>KARVINEN PASI</div> <div>LAITINEN ANTTI</div> <div>LEVI</div> <div>RIITTA</div> <div>SALME</div> <div>SARI</div> </div> </div> <div> <div>01 FINLAND</div> <div>11022393</div> <div> <div>HOLOPAINEN ANNE</div> <div>KARITUNEN MARKKU</div> <div>SIISKONEN MARJA</div> <div>SILJA</div> <div>SONJA</div> </div> </div>	<div> <div>BRAHE STREET</div> <div>2</div> </div> <div> <div>BRAHE STREET</div> <div>3</div> </div> <div> <div>BRAHE STREET</div> <div>5</div> </div> <div> <div>BRAHE STREET</div> <div>10</div> </div>
<div> <div>01 FINLAND</div> <div>06570774</div> <div> <div>HELM</div> <div>KAIJA</div> <div>KERTTU</div> <div>KIMMO</div> <div>SAARA</div> <div>SELA</div> </div> </div> <div> <div>01 FINLAND</div> <div>06572905</div> <div> <div>HENRIKSSON PASI</div> <div>HIMANEN VEIKKO</div> <div>LATINEN MAIJA</div> <div>SALONEN INARI</div> <div>VASARA SARI</div> </div> </div> <div> <div>01 FINLAND</div> <div>18581614</div> <div> <div>KARVINEN PASI</div> <div>LAITINEN ANTTI</div> <div>LEVI</div> <div>RIITTA</div> <div>SALME</div> <div>SARI</div> </div> </div> <div> <div>01 FINLAND</div> <div>11022393</div> <div> <div>HOLOPAINEN ANNE</div> <div>KARITUNEN MARKKU</div> <div>SIISKONEN MARJA</div> <div>SILJA</div> <div>SONJA</div> </div> </div>	<div> <div>BRAHE STREET</div> <div>2</div> </div> <div> <div>BRAHE STREET</div> <div>3</div> </div> <div> <div>BRAHE STREET</div> <div>5</div> </div> <div> <div>BRAHE STREET</div> <div>10</div> </div>

INTERNATIONAL SEARCH REPORT

1

International application No.
PCT/FI 00/00374

A. CLASSIFICATION OF SUBJECT MATTER

IPC7: B07C 7/02, B07C 3/00
According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC7: B07C

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
SE,DK,FI,NO classes as above

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 4254875 A (E. VARHELYI), 10 March 1981 (10.03.81)	1-6
A	US 4739479 A (M. TAMADA ET AL), 19 April 1988 (19.04.88)	1-6
A	US 5833076 A (L.C. HARRIS ET AL), 10 November 1998 (10.11.98)	1-6

☐

Further documents are listed in the continuation of Box C.

☒

See patent family annex.

* Special categories of cited documents	<p>"A" document defining the general state of the art which is not considered to be of particular relevance</p> <p>"E" either document but published on or after the international filing date</p> <p>"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another claim(s) or which is special reason (as specified)</p> <p>"O" document referring to an oral disclosure, use, exhibition or other means</p> <p>"P" document published prior to the international filing date but later than the priority date claimed</p>
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X	document of particular relevance: the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
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Date of the actual completion of the international search

20-07-2000

Date of mailing of the international search report

26-07-2000

Name and mailing address of the ISA

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Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US	4254875 A	10/03/81	NONE	
US	4739479 A	19/04/88	JP 61071877 A	12/04/86
US	5833076 A	10/11/98	NONE	

INTERNATIONAL SEARCH REPORT	Information on patent family members	02/12/99	International application No. PCT/FI 00/00374
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